

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

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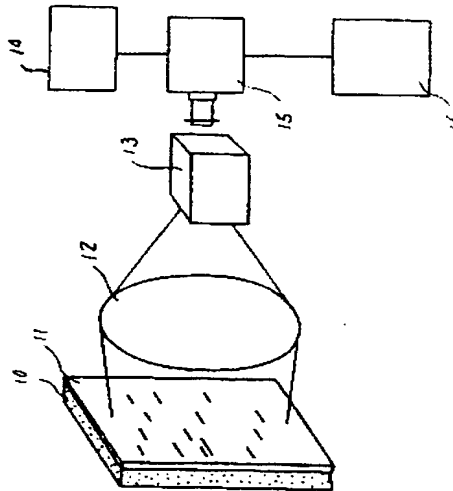
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APPLICANT : HITACHI LTD;

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TITLE : PATTERN DETECTION TYPE DNA  
SEPARATING AND DETECTING  
DEVICE



ABSTRACT : PURPOSE: To obtain a device to quickly determine the base sequence on DNA by receiving the  $\beta$  rays emitted from the labeling DNA by a scintillator, converting the same to a light image and subjecting the image to image processing.

CONSTITUTION: Electrophoresis is executed for a specified period in a gel migration plate 10 and the  $\beta$  rays emitted from the separated labeling DNA is received in the thin sheet-like scintillator 11 which converts the DNA band pattern to a fluorescent image. Since the  $\beta$  rays are emitted in all directions, the thickness of the scintillator 11 is required to be brought into contact with the plate 10 as tightly as possible by forming the scintillator to about  $\leq 0.2\text{mm}$  at the largest. The image may be blurred if the scintillator is detached from the plate 10 or is too thick. Since the resulted fluorescent intensity is weak, the image processing is not possible in this state. The light is thereupon condensed by a lens system 12 and thereafter the intensity is increased by using an image amplifier 13. The stored image by using a TV camera 15, etc. is processed.

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